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THE SUBJECTIVE AND THE OBJECTIVE VIEW OF DISTRIBUTION.

It is my object in this paper to show the wide divergence which the theory of Distribution presents according as we regard it to deal with objective or with subjective "costs" and "utilities," and to indicate the nature of the connection which exists between the objective and the subjective dividend or surplus.

By "objective" cost here is meant the amount of productive energy which is necessary for the making of a piece of wealth, measured by foot-tons, hours of labor, or some other objective social standard and involving no consideration of the different amounts of painful effort required for the given outputs of energy according as this man or that man is required to do the work. By objective utility is meant the total advantage attaching to the possession and use of a commodity regarded as a quality inherent* in this commodity and considered from the social as distinct from the individual consumer's standpoint. The life-sustaining and pleasurable properties of a coat, a loaf, a piano, estimated as a salable object without reference to the needs of the particular person into whose hands it passes, constitute their objective utility. Market value is objective utility expressed in terms of money. With the quantity of pain involved in obtaining a given quantity of objective cost or productive energy, and the quantity of pleasure derived from consuming a given quantity of objective utilities, the objective setting of the problem of distribution has nothing to do.

The objective setting will take the following shape. A number of units of objective cost (productive force) consisting of :

*Since the word "inherent" may mislead as implying an absoluteness or permanency which is not in accord with fact, I may be taken to follow Jevons in regarding it as "a circumstance of things arising out of their relation to man's requirements."

- x Units of human physical effort of various kinds (measured by foot-lines or by other physical standard),
- y Units of mental effort of invention, management, etc.,
- z Units of productive force in "saving,"
- v Units of natural forces in land, etc., and of social productive effort not referable to individual motives, comprising an aggregate productive force or objective cost, $v x y z$, produce an aggregate of units of objective utility, $V X Y Z$.

The objective problem of distribution lies in the question, "What laws regulate the apportionment of $V X Y Z$ among the exerts of $x y z$ and the owners of v ?"

We may for the present postpone consideration of the claims included under v and confine our attention to $x y z$. As a first charge upon the dividend $V X Z Y$ come a number of minimum wages, earnings, interests. That is to say in any community at any given time some definite proportion of the utilities comprised in $V X Y Z$ must be attached to the various persons who exert the forces $x y z$ in order to induce a continuance of these necessary efforts. The proportion of the dividend which goes in these charges and the determination of each charge are governed directly by considerations of subjective cost—that is by the amount of painful effort which must be suffered in order to secure the requisite quantity of units of each kind of objective cost. In order at any time in any society to induce individuals to undergo the necessary amounts of painful efforts, a certain proportion of the aggregate of objective utilities must be allotted to them. Although at different times and in different social conditions different quantities of objective utilities will be required to evoke the same amounts of individual productive effort, in relation to the consideration of a particular dividend these may be regarded as fixed charges.

It is, however, necessary to clearly signify what services form the basis of claims to these charges in order to realize

the amount and character of the objective dividend which remains for distribution by other laws.

By a minimum wage I mean the lowest real wage necessary to evoke the effort of the marginal laborer in each class of labor. This is not necessarily, as Professor Marshall seems to think, the exact equivalent of a marginal laborer's product. It may be less, as will be the case where there exists any unemployed competitors for any grades of work above the lowest: it cannot be more, assuming an economical application of capital.

Regarding laborers as divided into a number of non-competing groups, we have a number of these minima for different classes of work.

Where payment is by time wage pure and simple, the superior ability of a laborer within his class is not represented in wages. But where piece wages in any form prevail a number of individual rents of ability emerge from each specific wage level.

The same gradation applies to various kinds and degrees of mental productive efforts. We have minimum earnings of management in several classes of brain labor and also individual rents measuring different degrees of ability within the class.

If there existed in a community absolute equality of opportunity in the selection of kinds of work and the acquisition of kinds of skill, that is to say, if there were absolute fluidity of labor, all specific rents would disappear, individual rents alone remaining. The former are determined by the degree of "monopoly" or absence of free competition attaching to the several classes of work. Supply of labor thus limited commands a higher price. If we compare an hour's labor of a physician with that of a porter we find the former is more highly paid because (even assuming free competition among existing physicians) the supply of physicians offering their services at the wage of the most efficient porter would be greatly below the demand at that price.

That is to say under existing conditions supply and demand for physicians' work would equate at a much higher mark than for porters' work. It is this monopoly power in its various degrees that gives rise to a number of specific rents of labor or "class wages." They are correctly to be regarded as determined not by the higher estimate set by society upon a particular kind of work (for a baker's is absolutely more necessary than a lawyer's) but by causes affecting the supply of labor. An effective system of technical education, together with a removal of other barriers which ignorance, poverty, social prejudice, etc., impose on free entrance into the several trades and professions would, by practically securing fluidity of labor abolish specific rents of labor. While individual differences of wage are necessary charges on the objective dividend, specific rents of labor are not.

The next charge upon the objective dividend is a number of minimum interests of capital in various classes of investment. If capital were absolutely fluid and competition in investments free, there would be only one rate of interest, namely, that necessary to evolve the marginal act of saving, the last "saving" required to contribute to the fund of capital socially necessary to assist in producing what was required to keep pace with current consumption.

But capital may be graded similarly with labor in regard to the remunerativeness of its several kinds of employment. Eliminating all elements of risk, skill of management, etc., it would be evident that State or municipal privilege or monopoly, trade secrets, monopolies arising from the possession of land, class opportunity, and large scale of production, enabling the narrowing of competition in various shapes and degrees, establishes class differences of investment, which resemble the specific grades of labor. Hence as in labor so in capital, there are specific and individual levels of remuneration.

The y units of productive force in saving are reckoned in terms of physical and mental effort of the "savers."

The marginal act of saving is related to the minimum interest as the marginal laborer's effort is related to the minimum class wage with this single difference that, whereas, the marginal laborer's wage, though not exceeding his product, may be more than sufficient to evoke his effort, supposing no unemployed laborers in his class, the marginal interest will not be more than enough to evoke the marginal effort of saving, unless we suppose the extreme case of a society with a social and economic cleavage so distinct as to confine the possibility of saving to a few, while the many are kept closely down to a bare subsistence wage.

The effort of saving, I am disposed to urge, is productive of wealth just as is any other effort, and is not to be regarded as either a negative force of production, or as a condition of the effective application of labor. In order to recognize this truth we must bear in mind that it is not the preliminary act of producing something not destined for immediate consumption that constitutes the productive effort of saving, but the continuous restraint of the desire of personal enjoyment of one's property. This effort, I think, may be rightly regarded as the efficient cause of the fructification of future goods into present goods which some economists of the Austrian school appear to think inconsistent with a "productivity" theory of interest. This attribution of antagonism between the "productivity" and the "time" theory of interest is, I believe, based on the same misapprehension which has always denounced the "productivity" theory on the ground of the "negative" character of the effort of abstinence. There is no basis for this distinction of positive and negative effort. The force exerted in the shape of continuous self-restraint of an owner of capital is the force which enables the future goods to pass into present goods, it is an effort as truly productive as the effort which lifts so many foot-tons.

Hence the minimum interest will be a fixed charge upon the objective dividend, because it is required to evoke the

subjective "cost" or painful exertion which furnishes one kind of productive force or objective cost.

Since it is essential to the acceptance of this analysis that abstinence and other forms of serviceable "sacrifice" shall be included as subjective "costs" forming the basis of claims upon the objective dividend, I must here turn aside to deal with Professor Patten's objection to such inclusions. He objects to rank the effort of abstinence, involved in saving, under subjective "cost," on the ground that the thrifty man "has a surplus of pleasure in supplying future wants instead of a surplus of pain,"* or, to adopt Herbert Spencer's term, the man's mind is so powerfully "re-representative" that he reaps a net satisfaction from his act of abstinence. But surely if this is a reason for excluding abstinence from subjective "cost" there is no such thing as "cost" at all, for the same argument will exclude every form of exertion. Every voluntary exertion is attended by a satisfaction, or, subjective utility, the consideration of which, as a present motive, must outweigh the present pain of the exertion, for otherwise no action would be done. Every free, conscious action, is motivated by a desire to obtain the net balance of satisfaction which the imagination presents as the resultant from the conflict of pleasures and pains which attend the performance of the action. If instead of applying the term "costs" to the pains as they occur and "utilities" to the pleasures as they issue, we consider only the resultant, then no use remains for the term "costs" at all, save in the case of a miscalculated action, for the resultant of a reasonably ordered action will always appear in terms of pleasure or subjective utility. This confusion of Professor Patten's argument appears more manifest in his illustration of the operation of hunger. "Hunger adds to the pleasure of the meal more than it takes away from it. . . . Can we at the same time say 'Hunger is the best sauce' and also call it a pain? The sensation may continue disagreeable but we enjoy the feeling it creates. In

* "Cost and Utility," *ANNALS*, Vol. iii., p. 414, January, 1893.

computing the surplus of a meal we should therefore reckon the anticipated feelings which hunger produces and the resulting advantages, as a net gain rather than an uncompensated loss."* Here the actual pain of hunger is confused with the pleasure attending the imagination of its relief. The pain is, no doubt, a necessary condition of the attainment of the pleasure, and in certain cases the pleasure may even outweigh the pain, but the feeling of hunger is a pain for all that, and must rank as a subjective "cost." The labor of preparing the meal to a hungry man may be a process attended by a large surplus of pleasure in the way of anticipation, but since every labor is undertaken under the pressure of a similar motive, the reckoning of subjective "cost" disappears altogether if we look only to the net resultant. So long as we maintain the antithetical terms "cost," and "utility," we must count under the former all forms of self-assertion or self-restraint which, of themselves and in their direct effects involve pain. The difficulty connected with the inclusion of "saving" under painful effort is largely due to the selection of the term "abstinence," which, as a negative expression, furnishes no contents of painful feeling. The real sacrifice of "saving," once clearly conceived from the standpoint of the marginal saver as a continuous painful self-restraint, obliges us to admit it as a pain commensurable with other painful efforts of production.

I would deal in the same way with other "sacrifices." Where any change in methods of production requires the abandonment of any advantage previously enjoyed, such "sacrifice" must reckon as a "cost." In going from the country to the city the workman gives up pure air for better amusements, the emigrant must change his diet, and whoever acquires regular habits of industry gives up a large part of the free goods he might enjoy—hunting, fishing, etc.† Professor Patten refuses to count any of these sacrifices as

* *Ibid.*, p. 415.

† *Ibid.*, p. 412.

"costs," because the change is supposed to be attended by a net surplus of gain. I should insist that the abandonment of the good air and other advantages once enjoyed should be reckoned under "costs." It might, however, be fairly urged that a distinction should be made between the sacrifice of good air, which is assuredly a "pain," and the change from one form of diet suited to country life to another form suited to city life. Having already reckoned the loss of good air and other physical disadvantages as pains and costs it may be plausibly argued that the change of diet is not a cost, *i. e.*, there is no "sacrifice" in abandoning an old diet, the use of which has now largely passed away. As to the other class of "sacrifices" involved in any acceptance of alternative courses of action, they may fairly be excluded from "costs." "If a laborer can obtain a surplus by making shoes or hats he must sacrifice one of these surpluses to obtain the other."* Such sacrifice I should not count a cost, for a choice of alternatives does not involve any new pain or the loss of any old pleasure. The loss of a settled home resulting from "the extensive movement of workmen from one country to another, and from country to town," must, however, be distinguished from the sacrifices just mentioned. It involves in itself a loss of pleasure which must be reckoned a subjective cost.

The same line of argument must apply to that "sacrifice" which Professor Patten severs most distinctly from other "costs," the damage inflicted upon consumption by an extension of the working day. When the cost of such an extension is being reckoned, to the pain of the increased physical or mental exertion must be added the pain represented by damaged consumption. Both these pains will be "pooled" as a single motive in the mind of the worker who is considering whether or not he shall extend his working day: the expense in money of inducing him to extend his working day must cover both kinds of pain. Both pains must therefore be regarded as the

**Ibid.*, p. 412.

subjective basis of objective costs. For certain purposes it is convenient to distinguish this "sacrifice" impressed upon consumption from other "costs" more directly linked with the energy given out in production. For example, in considering the importance of the eight-hour-day movement it is useful to give separate attention to the advantage which a shorter working day will confer by reason of its effect upon consumption. But since, as Professor Patten admits, this sacrifice is "measured in terms of cost" it will be surely most convenient to include it always under the generic title "cost," reserving the right to treat it as a "species" distinguishable from the other and more direct efforts of production when it may seem good. In the main scheme of production and distribution I hold it necessary to include this sacrifice under costs. Where Professor Patten distinguishes the two by urging that "costs . . . form a barrier below which the return of the producer cannot fall, thus fixing the limit to the changes in objective values through which the distribution of wealth is effected. Sacrifices, however, depend not on an act of production but on having certain goods to enjoy which must be given up to extend production,"* I should insist upon including sacrifice under the "costs" or "pains" which fix the minimum return in objective values. Moreover, since every act of production is an act occupying time and absorbing a portion of vital energy, I should not assent to the definite divorcement of "sacrifice" from "acts of production." Every act of production invokes a sacrifice of consuming time and consuming energy, and every change in methods of production will affect this time and this energy. In considering the causes of the increase or decrease of this particular species of "cost" it will be useful to look more closely and directly at "the distribution of the surplus," but since the changes in distribution of the surplus are closely related to changes in methods of production, Professor Patten does not seem justified in regarding this "sacrifice" as the

* "Cost and Expense." ANNALS, Vol. iii, p. 709, May 1893.

basis of a separate "fund" distributable under a different law from other subjective values.

These "sacrifices," which are rightly counted as "costs," must be regarded as commensurable with other efforts of painful exertion in production. In a given man, so much effort of painful self-restraint in "saving," so much deprivation of earlier forms of pleasurable consumption, so much diminution in the forms of pleasureable consumption which are retained, will find their equivalents in so many units of physical or mental exertion. All are forms of subjective "cost," and so far as they are severally needed for the output of "objective cost" or productive energy they have fixed claims on the objective dividend.

The objective view of distribution regards the objective dividend as divisible into two parts. One is composed of the minimum wages and interests necessary to evoke the different kinds and amounts of individual pain which furnishes the productive energy of the community.* The other section is comprised of economic rents including (a) a number of specific and individual rents of land. Specific rents being the minimum rent for wheat-land, market-gardens, top-lands, etc., whose produce competes in the same market, individual rents measuring the superiority of an individual piece of wheat-land, top-land, etc., over the land which pays the minimum rent in each several employment; (b) specific and individual rents of capital, representing the special advantages enjoyed by particular classes of investment and by individual business within each class, enabling the owners of capital to draw interest above the minimum economically necessary to evoke saving; (c) specific rents of labor or "class" wages, as distinguished from wages which mark the superior ability of an individual worker over

* These necessary wages and interests comprise the "expenses" of production. "Expenses," as commonly used by English economists, include various elements of monopoly rent. Professor Patten is pushed by his exclusion of "sacrifices" from "costs" to associate expenses with "reward for labors" and not with "cost." But if the use of "cost" above advocated is accepted, "expense" will most reasonably be used as the money expression of objective costs.

the worst worker employed in his class of work. These economic rents are radically distinct in nature from the minimum wages and interests in that they furnish no incentive to individual exertion. This will be readily admitted of the economic rent of land and that interest above the margin which we term "rents of capital." No attempt to tax these rents would prevent the owners of these requisites of production from using them as before.* Even as regards specific rents of labor it is equally true in the long run. The long continuance of a high-class wage establishes a fixed standard of comfort higher than that of common labor, and any attempt to reduce this is stoutly resisted. But the resistance is only for a time—a persistent, economic force can bear down a class standard of comfort and can extract from the members of the class the same effort for a less reward. It is true that there are economic limits to this leveling process. A higher standard of comfort may be necessary for a skilled kind of work. Too much, however, is made of this point by economists like Professor Marshall, who thinks that a man doing good intellectual work requires a family income of some £500 or £600 per annum to maintain his efficiency. Much of this expenditure, as indeed Professor Marshall admits, is occasioned by the demands of custom. It is probable enough that the standard of comfort habitual in the lowest paid classes of labor is below the true standard of efficiency, but it is not true that a scholar or a professional man living his life reasonably, and not requiring a heavy holiday fund to cure temporary excesses of labor, needs a much higher income.

If we were to take the national objective dividend and trace its apportionment, we should find that it went partly as rewards or stimuli of effort, partly as rents to those engaged in giving out individual effort and to owners of the forces of nature. If we took the price of a single consumption good, we could similarly resolve it into a number of payments made for

* Here I assume the taxation to be the common act of a whole industrial community. The attempt to tax certain rents of capital in England might lead to the transfer of this capital abroad.

expenses and rents at the several points in production. If we choose to regard the community's production as a single business, we can say that, after the necessary current expenses are defrayed, the rest is profit. This profit, consisting of economic rents, forms the "objective surplus," the law of whose apportionment has caused no little trouble to political economy in the past.

Now, however, that part of the payments received as wages and interest, as well as the whole economic rent of land, is acknowledged to belong to this "surplus," the law of the distribution of this objective surplus is more clearly and widely recognized. The surplus is divided by the law of "Monopoly;" the amount which falls to each owner of a requisite of production is governed by the prices which limit the supplies of the several requisites. Roughly speaking, where one of the requisites is short in supply relatively to the others, the owners of that requisite take the whole surplus. This is commonly admitted. But as there nowhere exists absolute transferability of capital, labor or land from one employment to another, capital will be relatively short in some industries or in some processes, land and labor in others. So the actual surplus will be divided at different points of the industrial machine, as rents of land, labor or capital. Without attempting to discuss the law of monopoly in its detailed bearing upon the distribution of this surplus, I may call attention to the following main forces which affect the position of the three requisites as claimants of the surplus.

a. Every increase or decrease of demand for commodities affects not only the quantity but the proportion of demand for the several requisites, and may therefore transfer the position of limiting requisite from one to another.

b. Similarly, from the point of view of supply or production, new inventions and improved skill, accessibility of new supplies will

(*a*) directly affect the relation between the quantity of supply of the different requisites ;

(*b*) enable one requisite to supersede another.

a will also affect *b* in several important ways. For example, an increase in demand is often the force enabling forms of capital, in the shape of machinery, to take the place of labor, so as to bring about a condition in which capital may become the limiting requisite, instead of labor, as heretofore.*

The surplus thus subject to apportionment is *one* surplus: the distribution of the whole of it falls under the operation of the same set of forces; it falls to land-owners, to capitalists, to laborers in proportion as the requisite of production owned by each is in short supply or in excess. This objective analysis gives us no information regarding human welfare. A given quantity of objective costs may obviously be related to any number of different quantities of pain according as they are differently distributed among producers, while a given quantity of objective utilities may be similarly related to any number of different quantities of pleasure according as they fall to different consumers in different proportions. Objective costs and utilities must be reduced to terms of subjectivity and the relation between the law of the distribution of the objective surplus and of the subjective surplus clearly formulated before we can have a science of political economy bearing any assignable reference to human happiness. Until this is done we have ideas of wealth and work which have no human significance; we have a study as far removed from any practical interest as geometry of the fourth dimension. Such a political economy can have no art attached to it. The purely objective treatment of political economists has been, in fact, responsible for nearly all the clumsy errors which its exponents have made when invited to display their art in advice or prophecy. Until the science is thus subjectivised it can be brought into no true relations either with ethics or politics and is not properly a branch of sociology at

* For a further account of the intricate interaction of these forces, see "The Law of the Three Rents," *Quarterly Journal of Economics*, 1891.

all, but what Ruskin called it, a branch of "mental gymnastics."

In order to get at the conception of the subjective dividend and the subjective surplus we will begin by a comparison of the working day viewed objectively and the same working day viewed subjectively. Taking the simplest case where each unit of objective "cost" is productive of the same amount of objective utility we shall get the following setting :

Hour.		Cost.		Utility.
1st	. . .	6	. . . yields	9
2d	. . .	8	. . . "	12
3d	. . .	6	. . . "	9
4th	. . .	4	. . . "	6

Since there is here no reference to the personal balance of pleasure or pain in the worker, but only to objective expressions of pleasure and pain socially measured, there can be no necessity for the fourth or last hour of labor of the individual worker to present an equal balance of cost and utility.

Now if this objective setting could be translated item by item into subjective terms, it might work out as follows :

Hour.		Pain.		Satisfaction.
1st	. . .	0	. . . yields	10
2d	. . .	1	. . . "	8
3d	. . .	3	. . . "	6
4th	. . .	4	. . . "	4

This indeed is the common presentation of the subject as a balance of pleasure and pain in the ordinary economic textbooks. In the case of a man working under such conditions his work, it is alleged, will be terminated at the fourth hour because there is a balance of pain and satisfaction derived from the activity of that hour. This conclusion is obviously based upon the supposition that we can treat each hour separately in reference to the balance of pleasure and pain.

Now Professor Patten has clearly shown that in an attempt to compute the working day hour by hour, the last hour will not present an exact balance of pain and satisfaction, but will yield a surplus of satisfaction : for otherwise the time of production will so encroach upon the time of consumption that the full subjective utility will not be got out of the objective utilities created in the earlier hours. If production were carried to the point where the final increment of effort taken alone were just repaid by the final increment of utility, the earlier utilities would have been found to have shrunk, and the consideration of this shrinkage will check production before this point. In a dynamic society, according to Professor Patten's treatment, the fourth or last working hour will not be four units of pain yielding four units of satisfaction, but rather four units of pain yielding five units of satisfaction. Now upon this consideration I understand Professor Patten to base his discovery of a surplus distinct and separate from the rest of surplus revenue and subject to a special law of distribution. "If there is a surplus in the last increment of a normal day's labor, the theory of distribution will be different from what it will be if there is no such surplus. In the latter case the whole distribution depends upon the cost of the marginal increment of production. The law of differential cost or rent will then determine the distribution of the surplus. But if there is a surplus at the margin of production, a part of the surplus is distributed, not by a law of cost, but by the law of monopoly. The most slowly increasing factors of production become monopolies and secure the greater part of the surplus. Producers who have the power of raising the objective value of their commodities do so at the expense of other producers and not of consumers."*

Now, if my statement of the question of distribution is correct, rents can in no way be correlated to this surplus arising from the last increment of a day's labor, assuming

* "Cost and Utility," ANNALS, Vol. iii, p. 427, January, 1893.

this later surplus to exist. For while rents form an objective surplus, the balance of objective utilities, after abstracting objective costs, a surplus measureable in money, this other alleged surplus is subjective and obtained by a comparison of pleasures and pains. In the objective setting I found a single surplus to exist after all costs were defrayed, distributable, however, by a law of monopoly, which I found to be the true and only "law of rent," and which operates in exactly the way of the law of monopoly to which Professor Patten refers the distribution of this "subjective" surplus. If then this surplus, arising from the last increment of a day's labor, exists at all, it belongs to the "subjective" setting of distribution and cannot be grouped as a species of the same genus with differential gains, which, in so far as they are caused by differences in nature, are objective quantities.*

It is, however, the existence of this "surplus value" assigned to the last increment of a day's labor that I wish to call into question. It seems to me to result from an unjustified retention in the subjective setting of distribution of that method of separate consideration of each hour which was possible in the objective setting.

In the objective setting we found that to each separate hour we could absolutely assign so many units of cost and so many units of utility. But it becomes quite impossible to transfer this objective table into a subjective table of the same kind, because, as Professor Patten himself shows, we cannot treat each hour's activity and rents as a separate thing. We are, in fact, unable to make the first statement contained in the subjective table suggested on p. 55.

During the first hour o pain yields 10 satisfaction, because the number of units of satisfaction due to the painless effort of this first hour will, retaining the hour-by-hour treatment, be different according to the different number of working hours in the day. It is clear that at the close of the

* As in Prof. Patten's "Theory of Dynamic Economics," p. 95.

first hour we are not in a position to state what the yield of satisfaction is. If we speak of it as 10, this 10 refers not to the subjective satisfaction, only calculable by reference to later events, but to some objective utility which is to yield the subjective satisfaction, *i. e.* we are obtaining our surplus of subjective gain by abstracting a subjective amount from an objective amount, which is illegitimate.

The true setting of a working day in subjective terminology may be conceived to be as follows :

Hour	Pain (Subjective Cost.)		Satisfaction (Subjective Utility.)
1st	— 1	yields 10 in a 1-hour working day.	
		“ 9 “	2-hour “
		“ 8 “	3-hour “
		“ 7 “	4-hour “
2d	2	“ 9 “	1-hour “
		“ 8 “	2-hour “
		“ 7 “	3-hour “
		“ 6 “	4-hour “
3d	4	“ 8 “	1-hour “
		“ 7 “	2-hour “
		“ 6 “	3-hour “
		“ 4 “	4-hour “
4th	7	“ 7 “	1-hour “
		“ 5 “	2-hour “
		“ 4 “	3-hour “
		“ 3 “	4-hour “

Now, here the subjective surplus for a 1-hour working day would be 11 units of satisfaction (the -1 placed as subjective cost signifying a net pleasure in the first hour of effort and being therefore added to the 10 units directly referable to the consumption of what is produced in the first hour). A 2-hour working day will yield a subjective surplus of 16 units (*i. e.* 17+1-2). A 3-hour working day will give a surplus of 16 (*i. e.* 21+1-6). A 4-hour working day will give a surplus of 9 (20+1-13). In such a case a 2-hour or a 3-hour

day will be indifferently chosen as presenting the largest subjective surplus. Now though it may be at once admitted that here, or in any other scheme of a working day, the last hour of labor will show a surplus of Satisfaction over Pain if the effect of a longer working day in diminishing the subjective utility of earlier products be left out of consideration, no scientific object can be gained by this method of measuring separably things which are organically related to one another. The net satisfaction of a 2-hour and a 3-hour day in the above scheme are equal, but in the 2-hour day a larger proportion of the satisfaction is derived from a fuller consumption of the objective utilities than in the 3-hour day, where a larger number of objective utilities are less effectively consumed. In taking a purely subjective view of the question we must confine ourselves purely to the reckoning of pains and satisfactions. There may be some question whether the injury done to consumption by an increased working day should be reckoned as diminished satisfaction or as increased pain, but there is no excuse for making of it the basis of a special and separate fund, a "surplus value," distributable by a separate law from that according to which the rest of the surplus of satisfaction is distributed. To do this is to go back to the consideration of objective utilities and to consider them as growing and shrinking according as the time to consume them is larger or shorter. In considering the effect of shortening or lengthening the working day of any class of workers the effect upon their real wages by an extension or a diminution of the time of consumption must be clearly kept in view, but we are not justified in making this consideration the basis of a separate fund. As a factor affecting the net utility of a working day it may be ranked with other factors, such as those which affect the intensity of labor or improve the character of labor by increased variety and interest of exertion, or give more variety or individuality to standards of consumption. The effect of a shorter or a larger working day upon the net

plus of satisfaction is only one of a number of considerations which, by their mutual action and reaction, determine the net surplus of satisfaction. Each force is subject to special laws determining its action, but when it has expressed itself by influencing the surplus of satisfaction it is merged in this aggregate.

We are thus unable to find, with Professor Patten, "a surplus in the last increment of a normal day's labor." The example of a working day given above will make it evident that from a detached view of the units of subjective cost and utility in reference to parts of the working day we can obtain no useful results, for we are applying an objective separatist method to things that are subjective and inseparable. When the utility produced in the second hour is reckoned subjectively it is unreasonable to exclude from the estimate of its cost the depreciation of the first subjective utility occasioned by the very conditions to which the second utility owes its existence. The subjective consideration of costs and utilities of a working day as a whole will thus yield a single "surplus," which will rise and fall in amount according as the increasing length affects the total subjective utility involved in the consumption of the larger or smaller objective utility. This view of the single subjective surplus of the individual may be directly transferred to the larger scale of a society, so that a given disposition of working individuals in a society will yield a single aggregate subjective surplus, which will be the representative, in subjective terms, of that aggregate of rents which form the single objective surplus.

The fundamental importance of clearly tracing the relations between the objective and the subjective social surplus is what most economists in the past have failed to realize. The objective economic treatment concerned itself with quantities of productive forces embodied in the forms of objective utilities, divided simply in accordance with the respective quantities of the different kinds of productive

forces engaged. It was not properly concerned with the questions : Who exerted these forces? How were these utilities consumed? The answers to these questions make no difference in estimating the quantity of objective wealth. But in the subjective measurement of wealth it makes all the difference, whose pain gave the productive force, and into whose pleasures the objective goods were resolved. For upon this detailed personal knowledge depends our knowledge of the quantity of subjective wealth. The same quantity of objective utilities will represent a small quantity of subjective utilities if they embody a large amount of pain and yield a small amount of satisfaction and vice versa.

The gist of all ethical criticism directed against economics has reference to its neglect to clearly trace the relation between the quantity of objective and of subjective wealth in a community : the charges raised against modern methods of industrial distribution refer to the fact that such distribution is void of any social guarantee insuring that an increase of the objective surplus shall be accompanied by any increase in the subjective surplus, or that it shall not be attended by an absolute decrease of the social subjective surplus.

What relation naturally subsists between the objective and the subjective surpluses, the separate origin and character of which I have tried to trace? The law expressing this relation is a simple one and may be set forth in familiar phrases. Any given piece of objective wealth expands subjectively according as its pain of production is small and its pleasure of consumption great. Hence a piece of wealth in order to be measured subjectively requires answers to the two questions, "Who produces it, and under what conditions?" "Who consumes it, and under what conditions?" In order to attain its maximum as a human good it must be produced with the least human pain and satisfy the greatest need. The phrase, "From each according to his powers, to each according to his needs," expresses the ideal distribution. Thus would the benevolent despot strive to organize

society, thus would the completely civilized democracy strive to organize itself. No comfort would be supplied until all had the necessities, no luxury until all had the comforts. Any breach of this rule, however justifiable upon other grounds, signifies directly that an objective good is converted into a smaller instead of a greater subjective utility. So on the other hand no objective cost must be extracted from *A* when it can be got with less pain from *B*. This, however, does not demand absolute equality measured by our ordinary ideas of effort and enjoyment. One person has what we call "greater capacities" for work and for enjoyment. Strictly speaking, he who is capable of most enjoying (or making the best total use of) anything ought to have it, even though he already has a larger supply of the commodity than another. So he who likes to put forth effort, or least dislikes it, should be called upon to do so. The net ultimate pain on the one hand and pleasure on the other are the true tests of the ideal distribution.

But here again I should not consent to take the direct conscious pleasure or pain as the test, the positions involved in an acceptance of Professor Patten's distinction of "positive" and "negative" utilities. His view, that the calibre of a man or of a society is to be measured by the quantity of positive satisfactions consciously referable to specific acts of consumption, seems to me untenable, and if accepted, would lead up to an ideal of distribution palpably unjust and even self-destructive.

I understand him to contend that a luxury is worth more than a necessary, because we appreciate it more highly and that only in proportion as we rise above the conscious relish of necessities do we attain a civilized level of consumption. Peaches have a higher "positive" utility than bread, because we get a higher conscious satisfaction from eating them. Professor Patten objects to the negative method of estimating a thing's "utility" by the effect of its withdrawal. But he lays stress upon the important part of the "positive" utility of a

good which arises from its harmonious composition of other goods. Now bread and any other fundamental unit of consumption must be regarded as inseparable from the consumption of the "positive" utilities of which it is the necessary condition. Though we may get little direct conscious pleasure from eating bread, the vitality it sustains enters into every higher unit of conscious enjoyment. Hence the necessities yield the largest enjoyment reckoned in consciousness and, measuring utility in conscious satisfaction, the largest utility is given to a commodity by enabling it to satisfy the most urgent needs. So, reversely, certain pains to which we have become inured must be reckoned as positive disabilities. The hard-working laborer often does not consciously value a holiday or any form of remission from his customary work. But the overwork is an evil for all that, and, moreover, an evil which in various ways is represented either in impaired physical enjoyment or in other vital losses, the conscious enjoyment of nature, books, art and other things of which he is deprived by excessive toil.

Further, accepting Professor Patten's theory of positive utilities, it would seem to follow that a small number of men with highly refined and elaborate tastes would represent a larger quantity of "positive utilities" in their consumption than a larger society whose evenly apportioned consumption contained a larger proportion of "negative utilities." Driving this to its logical conclusion it would appear that in any given society a larger net amount of "positive utility" could be achieved by the abnormal cultivation of a single person to a pitch of highest positive enjoyment than by any other disposition of utilities whatsoever. The newest utility is admittedly the one to which highest attention is given and which must figure most largely in consciousness, so that a single man continually plied with novel luxuries might yield a larger amount of "positive utility" than any number of persons less developed and kept to a lower habitual standard of comfort. I do not suppose that Professor Patten

will accept these conclusions, but they certainly seem to me to flow logically from his premises.

My objection against Professor Patten's estimate of subjective "utility" is identical with that which I raised against his estimate of subjective "cost." Just as it seemed best that subjective cost should include all pains, direct or indirect, resulting from the activity which found expression in objective cost, so, likewise, subjective utility must include all pleasures, direct and indirect. My charge against Professor Patten is that he appears to exclude from his "positive utilities" large elements of satisfaction which the secret and complex processes of vitality prevent the consciousness from distinctly referring to their true sources. It might be possible indeed in treating this subject, in order to prevent any misunderstandings about the meanings of pleasure and pain, to go behind these terms and to identify "cost" and "utility" with gain and loss of vitality.

In his most valuable analysis Professor Patten has shown how the utility arising from the consumption of a particular objective utility depends upon its relation to other utilities forming part of the consumption of the same individual, tracing the intricate results which the introduction of a new consumable will have upon the group of commodities with which it is brought into closer or more distant relations, *e. g.*, the effect of a new food upon the total utility of the diet, and also the effects upon other utilities affected by changes in the total utility of the diet. Equivalent effects may be traced on the side of costs. Each new increment in an old class of pain, each introduction of a new pain or cost, will operate upon the other elements of cost which go to make up the aggregate subjective cost. The same laws of harmony etc., which Professor Patten so skillfully traces in utility will have their corresponding laws in cost.

The view of distribution presented in this paper may be thus summarised. There is a single objective "surplus," consisting of those goods and services (or their equivalent

in money) which remain to be distributed after all those who have put forth personal effort in production have received what is sufficient to induce the continuance of such personal effort, *i. e.*, after the strict "expenses" of production have been defrayed. This surplus is distributed as "rents" to the owners of such requisites of production as are relatively short in supply at the several points in production. There is also a single subjective surplus which at any given time consists in the aggregate of human satisfaction rendered by the consumption of this objective surplus, divided in accordance with the laws of monopoly rent. The amount of subjective surplus related to a given quantity of objective surplus may vary indefinitely. Produced by the excessive toil of one class of a community and consumed by the excessive luxury of another class, it represents a minimum of subjective surplus or human welfare. Produced by the equal sacrifice of all and consumed in satisfaction of the equal needs of all it represents, the maximum subjective surplus. The history of the actual distribution of pains and utilities in connection with a given quantity of objective wealth in industrial societies presents an infinite number of possible stages between these two extremes of felicity and misery. How far the actual distribution in a society approximates to the ideally best or the ideally worst condition depends entirely upon the operation of those forces which apportion the consumption of the objective surplus or rents. Under present conditions it appears that the apportionment is ruled by forces social, political, economic, which assign various and shifting amounts of monopolistic power to the owners of the requisites of production, and that the operation of these forces is to no appreciable extent affected by considerations drawn from any estimate of the subjective surplus or net gain of human welfare. A final result yielded by this analysis is the recognition that since the subjective surplus, derived from a given quantity of objective surplus, may be expanded or contracted without assignable limits, by

diminution of subjective cost, by enhancement of subjective utility, or by a combination of these processes society is not, so far as its true satisfaction or life is concerned, at the mercy of mere quantity of objective wealth or "market values." Economies of painful effort on the one hand, of pleasurable uses on the other, are capable of such continuous advance as to render a society independent of the necessity of a continuous increase of objective wealth for its increased happiness.

In our analysis both upon its objective and its subjective side, cost has been most closely attached to the art of production, utility to that of consumption. But a large part of human progress will consist not merely in a diminution of the pain of production and an enhancement of the pleasure of consumption, but in drawing even into closer relation the arts of production and consumption and working unto nearer association the two activities. Thus, while for purposes of estimate, we cannot dispense with the antithetical character of "cost" and "utility," the production of a progressive society will have its units of "utility" in even closer casual relation to its units of "cost," the consumption of such a society being linked in detailed organic connection to its production. The work and life of the true "artist" by suffusing effort with enjoyment has from the individual standpoint advanced furthest along this road. But all productive work has in it some element of art, some part of the effort exercises individuality so as to yield a unit of personal pleasure, and reformation of the industrial arts may expand this element indefinitely. In proportion as each industry is capable of this transformation into an art, units of painful effort may be compensated or even supplanted by units of enjoyment, so that the very processes of production dominated hitherto by "cost" may grow more and more into processes of consumption dominated by enjoyment. In a measurement of individual or social life we cannot dispense with the antithetical terms, pleasure,

pain, effort, utility. Yet it will become increasingly difficult to apply the measurement to particular cases of conscious activity in life. Who shall say what is "cost" and what "utility" in the activity of a genuine artist? A society composed of such individuals is the noble ideal which that most enlightened and poetic of political economists, John Ruskin, has long held out before our eyes. Cost and utility, life and work, would be welded into an inseparable synthesis in the life of the true society.

What makes progress this way so slow is the crude quantitative consumption which prevails in our modern industrial societies whose directing control forces production to partake of the same character. This will continue so long and so far as the arts of production and consumption are unnaturally severed by handing over to certain individuals and classes an economic power to consume without producing. The power of a rich man to consume, as the last item of his least-prized luxury, that article whose production has cost the hardest-worked producer his last and most painful unit of effort, makes the conquest of art over utility impossible for the present.

Every equalization of economic opportunity represents a double gain, for it not only gives a higher subjective utility to each unit of consumption, but it lessens the subjective cost of each unit of production. As it increases utility and diminishes cost, so it also brings together the arts of production and consumption, which, meeting and fusing in every artistic activity or effort, would find their ideal identification in a society where work was life and where the art of living was perfected. This growing identification of work and life should be regarded as the mark and test of true social progress, because the society which has advanced furthest this way will be the society whose surplus of subjective utility over cost will be the largest, and which will therefore enjoy the largest quantity and value of life.

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